NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: DRAFT – December 8, 2016

Region: Fayetteville Regional Office
County: Cumberland
NC Facility ID: 2600013
Inspector's Name: Joshua L. Harris
Date of Last Inspection: 09/14/2016
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Valley Proteins, Inc. – Fayetteville Division formerly Carolina By-Products Fayetteville Division

Facility Address:
Carolina By-Products Fayetteville Division
1309 Industrial Drive
Fayetteville, NC 28301

SIC: 2077 / Animal And Marine Fats And Oil
NAICS: 311613 / Rendering and Meat Byproduct Processing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: N/A
NSPS: N/A
NESHAP: Minor Source Boiler MACT – 40 CFR 63, Subpart JJJJJJ
PSD: N/A
PSD Avoidance:
Minor Source Boiler MACT – 40 CFR 63, Subpart JJJJJJ & NSPS – 40 CFR 60.40c, Subpart Dc
NC Toxics: N/A
112(r): N/A
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Paul White General Manager (910) 483-0473 1309 Industrial Drive Fayetteville, NC 28301	Paul White General Manager (910) 483-0473 1309 Industrial Drive Fayetteville, NC 28301	Robert Vogler Director of Environmental Affairs (540) 877-2590 PO Box 10 Lewiston-Woodville, NC 27849+2586

Application Data

Application Number: 2600013.13B (2600013.13C, 2600013.14A & 2600013.14C; & Applicability Determination No. 2114)
Date Received: 09/23/2013
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 00951/T30
Existing Permit Issue Date: 08/03/2011
Existing Permit Expiration Date: 06/30/2014

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2014	19.82	52.22	28.10	39.76	5.05	0.3827	0.3355 [Hexane, n-]
2013	7.36	47.48	27.23	38.85	3.72	0.3587	0.3191 [Hexane, n-]
2012	3.01	46.05	26.06	38.06	3.40	0.4003	0.3618 [Hexane, n-]
2011	3.35	49.65	27.33	37.31	4.16	0.3079	0.2710 [Hexane, n-]
2010	3.59	45.78	24.16	32.63	3.40	0.2735	0.2395 [Hexane, n-]

Review Engineer: Judy Lee

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue: 00951/T31
Permit Issue Date:
Permit Expiration Date:

I. Purpose of Application

This Permit application is for a Title V renewal to an existing Title V facility with Air Quality Permit Number 00951T30, issued on August 3, 2011 and expiring on June 30, 2014** for Valley Proteins (VP), Inc., d.b.a. Carolina By-Products (CBP) Fayetteville Division located in Cumberland County.

** The renewal application (Application No. 2600013.13B) was received by the Division on September 23, 2013, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

The facility's current permit expired on June 30, 2014**.

***An application to renew Permit No. 00951T30 has been timely filed, so that an application shield pursuant to 15A NCAC 2Q .0512(b)(1) remains in effect. Permit No. 00951T30 shall not expire until the renewal permit has been issued or the request has been denied, and all terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or the request has been denied pursuant to 15A NCAC 2Q .0513(c).*

15A NCAC 2Q .0513 PERMIT RENEWAL AND EXPIRATION
(a) Permits being renewed …
(b) Permit expiration terminates the facility's right to operate unless a complete renewal application has been submitted at least nine months before the date of permit expiration.
(c) If the permittee or applicant has complied with Rule .0512(b)(1) of this Section, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

As stated above, the renewal application was received by DAQ – RCO on September 23, 2013 (due on September 30, 2013), or at least nine months prior to the expiration date, with additional application amendments received as detailed below. Therefore, per 2Q .0513, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

❖ Since submittal of Valley Proteins renewal, the following requests have been submitted:

- November 1, 2012 - Applicability Determination No. 2114 request for installation of a HIVAC System [Approval sent on December 7, 2012]
- September 18, 2013 - 502(b)(10) change (2600013.13C) to replace existing rotary feather dryer (ID No. ES-5c) with a similar dryer, Stord Bartz TST 100 discor dryer venting to condenser CD-5c [Approval sent on September 27, 2013]
- February 28, 2014 – Minor modification request (2600013.14A) to replace two control devices with comparable equipment and to install ductwork to allow routing the existing feed plant non-condensable gases (NCGs) to the CD4h Packed Bed Scrubber as an additional alternative control scheme [Approval sent on February 28, 2014]
- April 3, 2014 – Minor modification request (2600013.14B/C) to replace a control device with comparable equipment, non-condensable treatment system CD6a Venturi Scrubber [Approved April 13, 2014]

The below items were requested with the renewal application:

1. Facility name change

Per Section AA3 – Application for Name Change Valley Proteins, Inc. has requested the following:

New Facility Name: Valley Proteins, Inc. – Fayetteville Division

Former Facility Name: Valley Proteins, Inc. – d.b.a. Carolina By-Products – Fayetteville Plant

2. Removal of equipment that is no longer in service and has been removed from site (See Form A2 below)

2. Facility Description [insert from previous review and information taken from Form AA – Administrative Application (General Information)]

Valley Proteins, Inc. – Fayetteville Division (Valley Proteins) operations consist of the manufacturing of prepared animal feeds and feed ingredients by processing animal and marine fats and oils. Valley Proteins is a poultry rendering facility that consists of two plants. One plant produces feed grade and the other pet food grade products. Finished products are feather, poultry and pet food grade meals and poultry and yellow greases.

Rendering at the Feed Grade Plant includes one cooker, two feather dryers, seven (7) feather cookers, one feather hydrolyser, a grease process, and meal load-out operations. Rendering at the Pet Grade Plants includes two cookers, and poultry meal and feather meal load-out operations. Valley Proteins also operates six (6) boilers for process heat generation and odor control and one (1) temporary boiler.

Valley Proteins is a rendering facility engaged in the manufacturing of protein meals, fats and oils.
Primary SIC/NAICS Code: 2048, 2077

3. Application Chronology

Please see the attached Comprehensive Application Reports for 2600013.13B, 2600013.13C, 2600013.14A, 2600013.14C and email correspondence for more details.

4. Proposed Changes/Permit Modifications/TVEE or ESM Discussion

Changes to Valley Protein's current permit **(Permit Number 00951T30)** for this renewal are summarized in the table below:

*****Update with table from permit**

Proposed Equipment Changes
Per application submittal for this modification, the following changes were requested (see Form A2 for more details):

Equipment to be ADDED: - None

Equipment to be MODIFIED:

Emission Source ID No.	***Emission Source Description***	***Control Device ID No.***	***Control Device Description***
Applicability Determination No. 2114			
IHS	*HIVAC System*	*Bagfilter no ID*	*Insignificant per 15A NCAC 2Q .0503(7)(g)*
502(b)(10) change (2600013.13C)			
ES-5c	*Feather dryer*		
Minor modification request (2600013.14C)			
ES4	*Feed Grade Plant Offal Process*	*CD6a*	*Venturi Scrubber (replacement)*
ES5a & ES5c	*Two dryers*	*CD4g*	*Mist eliminator (existing)*
ES5d	*Feather hydrolyser*	*ES1, ES2, ES3*	*Boilers Nos. 1, 2 and/or 3 (existing)*
ES7	*Grease process*	*OR*	
		CD4c	*Venturi Scrubber (replacement)*
		CD4e, ES12	*Mist eliminator, boiler No. 4 (existing)*

Emission Source ID No.	*Emission Source Description*	*Control Device ID No.*	*Control Device Description*
		OR	
		CD6a	*Venturi Scrubber (replacement)*
		CD6b	*Packed Bed Scrubber (replacement)*
		OR	
		CD6a	*Venturi Scrubber (replacement)*
		CD4h	*Packed Bed Scrubber (replacement)*
Minor modification request (2600013.14A)			
ES4	*Feed Grade Plant Offal Process*	*CD6a*	*Venturi Scrubber (existing)*
ES5a & ES5c	*Two dryers*	*CD4g*	*Mist eliminator (existing)*
ES5d	*Feather hydrolyser*	*ES1, ES2, ES3*	*Boilers Nos. 1, 2 and/or 3 (existing)*
ES7	*Grease process*	*OR*	
		CD4c	*Venturi Scrubber (existing)*
		CD4e, ES12	*Mist eliminator, boiler No. 4 (existing)*
		OR	
		CD6a	*Venturi Scrubber (existing)*
		CD6b	*Packed Bed Scrubber (existing)*
		OR	
		CD6a	*Venturi Scrubber (existing)*
		CD4h	*Packed Bed Scrubber (existing)*
ES6	*Feed Grade Plant Misc. Equipment*	*CD4f*	*Venturi Scrubber (replacement)*
		CD4h	*Packed Bed Scrubber (replacement)*

Equipment to be DELETED:

Emission Source ID No.	*Emission Source Description*	*Control Device ID No.*	*Control Device Description*
Per Form A2 of Renewal application 2600013.13B			
ES-5b	*Feather cookers (7)*		
ES-10	*Anaerobic system*	*CD-10a*	*Natural gas-fired flare*
CD-7b	*Air condenser*		

- ✓ *ESM was updated accordingly (See pink sheet for approval).*

5. New Equipment, Change in Emissions and Regulatory Review

- Applicability Determination request (No. 2114) to install a HIVAC System to vacuum up protein dust. [Approved December 7, 2012]

  This equipment will be used in the plant to vacuum up dust from the floor and from equipment. This dust is generated while grinding and otherwise processing the protein meal. The HIVAC System will be used for a few

hours daily, and less than 500 hours for the year to maintain the facility housekeeping. The HIVAC has a self-contained high-efficiency bag-filter system that is an integral part of the system to capture the majority of the dust vacuumed up. The HIVAC filter system exhaust duct discharges outside the building. The HIVAC System emissions of particulates (PM, PM10 and PM2.5) will be well below the insignificant activity threshold of 5 tons per year for these pollutants. The HIVAC System exhaust is not believed to contain volatile organic compounds (VOCs) or hazardous air pollutants (HAPs). The emissions calculations for the HIVAC System are shown in Table 1 below.

Table 1: HIVAC Emissions

Pollutant	Controlled Emissions	Potential to Emit Emissions		Expected Actual Emissions	
	lbs/hr	hours	tpy	hours	tpy
PM	0.2	8,760	0.88	500	0.05
PM10	0.2	8,760	0.88	500	0.05
PM2.5	0.2	8,760	0.88	500	0.05

Please see email correspondence dated December 22, 2016 for more details.

- 502(b)(10) modification request (2600013.13C) for replacement of existing rotary feather dryer (ID No. ES-5c) with a similar dryer, Stord Bartz TST 100 discor dryer venting to condenser CD-5c. [Approved September 27, 2013]

  The replacement dryer venting to condenser CD-5c is subject to particulate emissions equation limit in 15A 15A NCAC 02D .0515 and the 20 percent opacity limit in 15 NCAC 02D .0521. There is no expected increase in capacity, steam load or emissions associated with the proposed replacement dryer. The Stord Bartz TST 100 discor dryer has steam heated rotary discs rather than steam tubes running the length of the dryer. Proposed monitoring to demonstrate compliance with these limits is daily, weekly and monthly inspections; and visual emissions observations. Additionally, monitoring shall include an annual (for each 12-month period following the initial inspection) internal inspection of the condenser and external inspection of the associated ductwork to ensure structural integrity. Thus, no change in regulatory applicability or change in emissions.

  - ✓ Application forms were requested via email on October 24, 2016. A technical review and equipment will be incorporated into the facility's permit during this permit renewal. In order for review engineers to do a technical review we must have complete application forms. Complete application forms were received by DAQ on November 23, 2016.

  A technical review was performed during this renewal process; thus, the appropriate monitoring, recordkeeping and reporting requirements will be added during this permit renewal.

- Minor modification request (2600013.14A) for replacement of two control devices with comparable equipment and to install ductwork to allow routing the existing feed plant non-condensable gases (NCGs) to the CD-4h Packed Bed Scrubber as an additional alternative control scheme. [Approved February 28, 2014]

  - Replace the existing Venturi Scrubber CD4f (high intensity treatment system) with like-sized scrubber of an updated design. This Venturi Scrubber currently controls emissions from the Feed Grade Plant Miscellaneous Equipment (ES6).
  - Replace the existing Packed Bed Scrubber CD-4h (high intensity treatment system) with a new 35,000 cubic feet per minute (cfm) Packed Bed Scrubber (CD-4h). The CD-4h Packed Bed Scrubber will continue to control emissions from the Feed Grade Plant Miscellaneous Equipment (ES6).
  - Install new ductwork routing emissions from existing Feed Grade Plant sources ES4, ES5a, ES5c, ES5d and ES7 to the CD-4h Packed Bed Scrubber as another alternative control scheme.

  No changes to current emission rates for any regulated pollutant are expected due to these proposed changes. No changes to the monitoring or recordkeeping requirements currently in place for CD-4h Packed Bed Scrubber are anticipated due to its replacement.

  The application was sealed by Daryl J. Whitt, P. E. on February 10th, 2014. Professional Engineer (PE) Seal No. 027722 pursuant to 15A NCAC 2Q .0112 "Applications Requiring a Professional Engineering Seal"

- Minor modification request (2600013.14C) to replace a control device with comparable equipment, non-condensable treatment system CD6a Venturi Scrubber. [Approved April 13, 2014]

  Existing Venturi scrubber (CD6a) was replaced with a new device, sized to optimize air flow to the entire scrubber system, which was upgraded to improve odor control. The new scrubber has better control efficiency than the existing Venturi scrubber for the non-condensable gases (NCGs). It has the same design and equivalent control parameters. No changes to current emission rates for any regulated pollutant are expected due to these proposed changes. No changes to the monitoring or recordkeeping requirements currently in place for the non-condensable treatment system CD6a Venturi Scrubber are anticipated due to its replacement. Venturi scrubber (CD6a) controls emissions from the following emission sources (ID Nos. ES4, ES5a, ES5c, ES5d and ES7)

  The application was sealed by Daryl J. Whitt, P. E. on April 2nd, 2014. Professional Engineer (PE) Seal No. 027722 pursuant to 15A NCAC 2Q .0112 "Applications Requiring a Professional Engineering Seal"

In addition to requirements provided in Section 3 – General Conditions, the facility will remain subject to all current regulations upon issuance of the revised permit with the following exception as discussed below:

- ✓ Avoidance Condition for 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Industrial, Commercial, and Institutional Boilers", including Subpart A "General Provisions," for temporary boiler (ID No. ES-21)

Per email correspondence on October 19, 2016, Valley Proteins confirmed that currently permitted temporary boiler (ID No. ES21) was indeed a temporary boiler:

"The temporary boiler (ES21) as permitted at the Fayetteville Division site is truly a temporary boiler from the perspective of 40 CFR Part 63 Subpart JJJJJJ as described below:

- *When a temporary boiler is used at the Fayetteville Division site it is not attached to a foundation.*
- *During the last five years, no temporary boilers have been located or operated at the Fayetteville Division site.*
- *The facility is not a seasonal site.*
- *When on site, the temporary boiler is not moved from one location to another within the facility, performing the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of the definition of a temporary boiler."*

Thus, the following avoidance condition for 40 CFR 63 Subpart 6J temporary boilers at minor facilities will be added for temporary boiler (ID No. ES21) as part of this renewal.

X. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .1111: MAXIMUM AVAILABLE CONTROL TECHNOLOGY

a. In order to avoid the applicability of Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Available Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Industrial, Commercial, and Institutional Boilers", including Subpart A "General Provisions," the Permittee shall operate the emission source (**ID No. ES21**) as a temporary boiler as defined in 40 CFR 63.11237. Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:
   i. The equipment is attached to a foundation.
   ii. The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a

location within the facility and performs the same or similar function will be included in calculating the consecutive time period unless there is a gap in operation of 12 months or more.

iii. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

iv. The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

[40CFR 63.11195, .11237]

Recordkeeping [15A NCAC 2Q 0508(f)]

b. The Permittee shall maintain, and make available upon request, the following records:
   i. the first, last and total number of days the boiler is on site for each consecutive time period the boiler is brought on site and;
   ii. the function of the boiler for each consecutive time period.

The results shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the records in condition b. above are not maintained or the boiler does not meet the definition of a temporary boiler as defined in condition a. above.

✓ 15A NCAC 2D .1111, "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers"

Valley Proteins currently has six process boilers #1 through #5 and #7 **(ID Nos. ES1, ES2, ES3, ES12, ES14 and ES22)** that will be subject to Subpart JJJJJJ at this renewal. The process boilers at Valley Proteins combust the following fuels: natural gas, No. 2 oil, recycled No. 4 equivalent fuel oil, No. 5 oil, No. 6 oil, and saleable fat oil. When the application was submitted on November 5, 2009 (2600013.09A) to add boiler (ID No. ES-22) and issued permit No. 00951T29, the boiler MACT had been vacated. At that time DAQ submitted a Commercial and Industrial Solid Waste Incinerators (CISWI) determination request to the DWM on February 23, 2010 regarding a determination as to whether the saleable fat and/or recycled No. 4 fuel oil were "solid waste" based on the facility response received January 20, 2010 to an additional information request sent to Valley Protein on January 6, 2010. The facility submitted a CISWI applicability determination addressing the ten factors found on page 2 of DAQ's guidance memorandum dated September 28, 2009 regarding CISWI and the Division of Waste Management (DWM) determination received via email on May 3, 2010 (Attachment 1) that states:

"As long as the management of this material is consistent with the description in this document, I agree that the material is not a waste."

Please refer to the review and supporting documentation for addition of the process boiler for more details.

Therefore, at this renewal no further analysis of these two fuels is required. The following Boiler MACT language for Subpart 6J minor sources will be added to the renewed permit for all existing process boilers located at Valley Protein's Fayetteville facility.

- ❖ Based on the most recent inspection report the boiler tune-ups and energy assessments were completed as follows:

MACT/GACT/NSPS: The sole NESHAP currently applicable is 6J, and all 6 boilers (7 including the temporary back-up, which has not been on site for years) are subject. CBP had initially (early 2013) opted for the NC-contrived, NG-only exemption (later adopted by EPA), but combusted sufficient liquid fuel in 2013 in process (not curtailment, maintenance, etc.) that they simply declared all boilers subject. Permit T30 predates the NESHAP 6J requirements, and the facility was sent the stipulations as an amendment. The requirements are a biennial tune-up (each boiler), and a one-time energy assessment (facility-wide) prior to 19 March 2014.

APPEARED IN COMPLIANCE: *The initial tune-ups were completed 25-27 March 2014. The records are available and appear complete. The energy assessment was conducted 19-20 Nov 13. Tune-ups are performed annually, and were last performed on 14 June 2016 for all boilers; the facility has a copy of the required certification on site.*

Per IBEAM Actions Module on the Reporting screen the Notification Of Compliance Status was submitted on June 3, 2014, based on Robert Hayden's note it was submitted via CEDRI.

The following condition for 40 CFR 63 Subpart 6J boilers at minor facilities was added for the six process boilers #1 through #5 and #7.

Emission Source ID Nos.	Emission Source Description	Control Device No.	Control Device Description
ES1, ES2, ES3, ES12, ES14 and ES22	No. 2 fuel oil and saleable fired boiler (greater than 10 million Btu per hour maximum heat input rate)	N/A	None

- *Oil and saleable fat (i.e., NHSM per 40 CFR 241)*
- *Heat input >10 mmBtu/hr*
- *no auto trim*
- *energy assessment*
- *assume – no ISO 50001 energy management program*
- *assume operation between effective date and compliance date*
- *assume initial notification met- 63.11225(a)(2)*
- *General Condition P to cover TV reporting*
- *Assume initial energy assessment, tune up, and Notification of Compliance has been met.*

X. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.11193, 63.11194(a)(1), (b), 63.11200(c)]

a. For these sources **(ID Nos. ES1, ES2, ES3, ES12, ES14 and ES22)**, the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers," including Subpart A "General Provisions."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.11237 shall apply.

General Provisions [40 CFR 63.11235]

c. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart JJJJJJ.

Compliance Dates

d. The Permittee shall achieve compliance with the initial tune up and energy assessment requirements no later than March 21, 2014.

i. These requirements have been met.
(A) The initial tune ups were completed March 25 – 27th, 2014.
(B) The energy assessment was conducted November 19 – 20th, 2013.
(C) Annual tune ups were last performed on June 16th, 2016.

[40 CFR 63.11196(a)(1), (a)(3), 63.11210(c)]

Notification of Compliance Status [40 CFR 63.11225)]

e. The Permittee shall submit a Notification of Compliance Status no later than July 19, 2014.

i. This requirement has been met on 06/03/2014.

General Compliance Requirements [15A NCAC 02Q .0508(b)]

f. At all times the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 CFR 63.11205(a)]
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition f. are not met.

Performance Tune-up Requirements [15A NCAC 02Q .0508(b)]

g. The Permittee shall conduct an initial tune-up of the boiler and subsequent tune-ups biennially.
i. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up.
ii. The Permittee shall conduct the tune-ups while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
iii. The tune-ups shall be conducted according to the following procedures:
(A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.
(B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
(C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.
(D) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
(E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
(F) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

[40 CFR 63.11201(b), Table 2, 40 CFR 63.11223(a),(b)]
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition g. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(b)]

h. The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor.

i. This requirement was met on 11/19-20/2013.

[40 CFR 63.11201(b), Table 2]

Recordkeeping [15A NCAC 02Q .0508(f)]

i. The Permittee shall maintain the following records:
   i. As required in 40 CFR 63.10(b)(2)(xiv), the Permittee shall keep a copy of each notification and report that was submitted to comply with this rule and all documentation supporting any Notification of Compliance Status that was submitted.
   ii. The Permittee shall maintain on-sire and submit, if requested by the Administrator, a report containing the following information:
      (A) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.
      (B) A description of any corrective actions taken as a part of the tune-up of the boiler.
      (C) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iii. The Permittee shall keep the following records to document conformance with the applicable requirements:
      (A) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
      (B) The Permittee shall keep a copy of each boiler energy assessment report.
      (C) For operating units that combust non-hazardous secondary materials (e.g. saleable fat) that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the Permittee shall keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR 241.3(d)(1). If you combust a fuel (e.g. saleable fat) that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2 and each of the legitimacy criteria in 40 CFR 241.3(d)(1). If the fuel (e.g., saleable fat) received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR 241.4, you must keep records documenting that the material is a listed non-waste under 40 CFR 241.4(a).
      (D) Records of the occurrence and duration of each malfunction of the boiler or of the associated air pollution control and monitoring equipment.
      (E) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in **condition f**., including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

   [40 CFR 63.11225(c), 63.11223(b)(6)]

j. The records must be in a form suitable and readily available for expeditious review. The Permittee shall keep each record for 5 years following the date of each recorded action. The Permittee shall keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The Permittee may keep the records off site for the remaining 3 years.

   [40 CFR 63.11225(d)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in conditions i. and j. are not met.

Reporting [15A NCAC 02Q .0508(f)]

k. The reporting requirements of 40 CFR 63.11225(b) shall be met by complying with General Condition P of Section 3 of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these reporting requirements are not met.

✓ Avoidance Condition for 40 CFR 60, Subpart Dc, "New Source Performance Standards (NSPS) for Area Sources: Industrial, Commercial, and Institutional Boilers", including Subpart A "General Provisions," for temporary boiler (ID No. ES-21)

In addition to the avoidance condition for MACT; DAQ guidance also allows for avoidance of NSPS Subpart Dc avoidance. Therefore, the following Subpart Dc avoidance condition will be added during this renewal for the temporary boiler.

X. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. In order to avoid the applicability of Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units including Subpart A "General Provisions," the Permittee shall operate the emission source (**ID No. ES-21**) as a temporary boiler as defined in 40 CFR 60.41c.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO2 emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

i. The equipment is attached to a foundation.
ii The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.
iii. The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
iv. The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

[40 CFR 60.40c, .41c]

Recordkeeping [15A NCAC 2Q 0508(f)]

b. The Permittee shall maintain, and make available upon request, the following records:
i. the first, last and total number of days the boiler is on site for each consecutive time period the boiler is brought on site and;
ii. the function of the boiler for each consecutive time period.
The results shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the records in condition c. above are not maintained or the boiler does not meet the definition of a temporary boiler as defined in condition a. above.

Reporting [15A NCAC 2Q 0508(f); 40 CFR 60.7]

c. The Permittee is required to submit a written notification of the manufacture date of any temporary back-up boiler (**ID No. ES21**) within 15 days after installation to the Division of Air Quality, Regional Supervisor.

✓ Avoidance Condition for 15A NCAC 02D .1100, "CONTROL OF TOXIC AIR POLLUTANTS"

STATE ONLY REQUIREMENT:

13. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. **Vendor Supplied Recycled No. 4 Equivalent Fuel Oil Requirements**. In accordance with 15A NCAC 02Q .0317, the Permittee is avoiding the applicability of 15A NCAC 02Q .0700 by using recycled fuels which are

equivalent to their virgin counterparts. The Permittee is allowed to use the recycled fuel oil(s) supplied by a DAQ-approved vendor as follows: [15A NCAC 02Q .0702]

The facility currently has stipulations in their Title V permit that limit the emissions of toxic air pollutants from the use of vendor supplied recycled No. 4 equivalent fuel oil. All limits contained in Valley Proteins existing permit are equivalent to their virgin fuel counterparts; thus, compliance is indicated. However, as of September 29, 2015, a list of approved vendors is no longer maintained by the DAQ. All references to "vendor supplied" in the existing permit concerning recycled fuels has been removed during this renewal.

6. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM

NSPS
New Source Performance Standards (NSPS) **DO NOT** apply to this renewal with modifications.

This facility currently has three boilers potentially subject to NSPS Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60.40c). However, during this renewal the temporary boiler was given an avoidance condition for NSPS; thus, there are only two boilers subject to NSPS Subpart Dc upon issuance of this renewed permit. The other boilers pre-date NSPS applicability.

NESHAP/MACT
National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations or 15A NCAC 2D .1111 "Maximum Achievable Control Technology" for Major sources of HAP do NOT apply to this facility. Based on the facility's potential to emit, this facility is NOT a major source of HAPs. However, there is a HAP Minor source "Generally Achievable Control Technology" or GACT that applies to the process boilers, 40 CFR 63, Subpart JJJJJJ. This will be added during this permit renewal (Please refer to Section 5 above for more details).

❖ Excerpt from latest inspection report dated September 22, 2016:

I. MACT/GACT/NSPS: The sole NESHAP currently applicable is 6J, and all 6 boilers (7 including the temporary back-up, which has not been on site for years) are subject. CBP had initially (early 2013) opted for the NC-contrived, NG-only exemption (later adopted by EPA), but combusted sufficient liquid fuel in 2013 in process (not curtailment, maintenance, etc.) that they simply declared all boilers subject. Permit T30 predates the NESHAP 6J requirements, and the facility was sent the stipulations as an amendment. The requirements are a biennial tune-up (each boiler), and a one-time energy assessment (facility-wide) prior to 19 March 2014.

APPEARED IN COMPLIANCE: *The initial tune-ups were completed 25-27 March 2014. The records are available and appear complete. The energy assessment was conducted 19-20 Nov 13. Tune-ups are performed annually, and were last performed on 14 June 2016 for all boilers; the facility has a copy of the required certification on site.*

PSD/NAAQS
The facility is a Major source under the Federal Prevention of Significant Deterioration (PSD) program. The facility currently has several PSD Avoidance limits for CO, NOx and SO_2 in their current permit. This renewal application with modifications does not affect this status.

Attainment Status
Cumberland County is currently classified as "attainment" for Particulate and Ozone based on the Electronic Code of Federal Regulations (e-CFR) data obtained from **Title 40: Protection of Environment**
PART 81—DESIGNATION OF AREAS FOR AIR QUALITY PLANNING PURPOSES
Subpart C—Section 107 Attainment Status Designations §81.334 – North Carolina.

Cumberland County is designated as "Attainment" for both North Carolina — Ozone Standards; thus, no permit change is necessary.

PM emissions – Based on NC DAQ's Planning and Attainment for $PM_{2.5}$ Nonattainment Areas, the only counties designated as nonattainment are Catawba, Davidson and Guilford.

According to the eCFR referenced above under VOC emissions, this designation has not changed; hence, Cumberland County is classified as "Attainment" for North Carolina—$PM_{2.5}$ (Annual NAAQS). In addition, the entire state is designated as "Unclassifiable/Attainment" for North Carolina—$PM_{2.5}$ [24-hour NAAQS] and for North Carolina—TSP the entire State is designated as "Better than national standards;" thus, no permit change is necessary.

The PSD minor source base line date for PSD increment tracking in Cumberland County was July 26, 1978 for particulate matter (PM_{10}) and sulfur dioxide (SO_2) emissions; and August 20, 2001 for nitrogen oxide (NOx) emissions. PSD increment tracking for PSD Class II purposes is required as part of this renewal with modifications due to an increase in $PM/PM_{2.5}/PM_{10}$ emissions of 0.2 pounds per hour.

112(r)
Per Form A3, 112(r) Applicability Information, this facility is not subject to 40 CFR Part 68 "Prevention of Accidental Releases" - Section 112(r) of the Federal Clean Air Act (Act) requirements because it does not use any of the regulated substances in quantities above the thresholds in the Rule that require a Risk Management Plan (RMP).

CAM
A Compliance Assurance Monitoring (CAM) (40 CFR Part 64) plan is not required for this renewal with modifications because the only active controls are scrubbers and process boilers used to control odor.

7. Facility Wide Air Toxics

This facility currently has a toxics avoidance condition for recycled No. 4 fuel oil. At this time the condition will be removed due to new DAQ guidance as discussed under Section V above.

A CISWI determination was made on May 3, 2010. It was determined that the saleable fat and recycled No. 4 fuel oil are not considered solid wastes.

8. Facility Compliance Status [taken from latest inspection report – September 22, 2016]

Discussion
Inspection Date: September 14, 2016
Inspector's Name: Joshua Harris
On-Site Inspection Result: Compliance

X. NON-COMPLIANCE HISTORY SINCE 2010:

05/21/2012 NOV issued for offensive odor offsite. Resolved 04 June 2012.

02/17/2011 NOV issued for offensive odor offsite. Resolved 20 June 2011.

09/23/2010 NOV issued for offensive odor offsite. Resolved 11 October 2010.

In addition to the above history, the facility has received a number of odor complaints.

XI. CONCLUSIONS / RECOMMENDATIONS:

- Carolina By-Products Fayetteville Division appeared to be operating ***IN COMPLIANCE*** during the inspection.

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9. Stipulation Review

FRO – Comments and Recommendations on Air Permit Application:

Please see Section 8 above or latest inspection report for more details.

10. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 2Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. Virginia is an affected State and Forsyth County is an affected Local Program within 50 miles of this facility and will be notified accordingly.

EPA's 45 Day Review period
XXXXXX (U.S. EPA, Region IV) were provided a draft permit for review on XXXXX. EPA 45 day review period ended on XXXXXX.

Public Notice to Affected States of the DRAFT Title V Permit began on XXXXX - No comments received.

Public notice of the proposed permit was posted on the NCDAQ website on XXXXX. Public Notice of the DRAFT Title V Permit ran from XXXXX to XXXXX. No public comments were received.

Regional Office – Mr. Joshua Harris of the Fayetteville Regional Office (FRO) was provided a draft permit and draft permit review document on December 1, 2016 and comments received on December 14, 2016.

Permittee - Mr. White of Valley Proteins, formerly Carolina By Products was provided a draft permit on December 1, 2016 and comments received on December 7, 2016.

All appropriate changes were made to the draft permit prior to issuance.

11. Conclusions, Comments, and Recommendations

PE Seal
A professional engineer's seal (PE Seal) was submitted with this renewal with modifications. Pursuant to 15A NCAC 2Q .0112 "Application requiring a Professional Engineering Seal," the applications were sealed as necessary. Please see Section 5 above.

Zoning
A Zoning Consistency Determination per 2Q .0304(b) was not required for this renewal with modifications.

Other Regulatory Considerations
- ✓ All appropriate application fees were collected for these applications.
- ✓ The applications were signed by the responsible official as designated in IBEAM.
- ✓ The appropriate number of application copies were received by DAQ.
- ✓ The applications included the Reduction and Recycling Form (A4).
- ✓ Public notice is required for this application since it is a Renewal.

All comments and suggestions provided during public comment period and EPA review discussed in Section 10 above were addressed as necessary; thus, this permit is ready for issuance.